

Melissa Regalado

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Education

Boston University College of Engineering
Bachelor of Science in Computer Engineering

Boston, MA
May 2026

Relevant Coursework

Applied Algorithms for Engineers
Physics of Semiconductor Devices

Introduction to Electronics
Computer Organization

Digital VLSI Circuit Design
Introduction to Logic Design

Selected Projects

Servo-Actuated Assistive Eating Utensil for Users with Motor Impairments

- Collaborated on design and prototyping of a mechanically stabilized eating utensil to assist individuals with hand tremors or reduced dexterity, achieving 100% pitch compensation and 76% roll stabilization.
- Spearheaded integration of dual-axis servo control with motion filtering to differentiate voluntary and involuntary gestures.

Real-Time Image Processing System using UART and FPGA

- Directed system architecture design, resolved UART timing issues, and guided integration of the MATLAB-FPGA workflow for seamless image transfer and display.
- Led development efforts on a hardware-accelerated image processing pipeline enabling real-time darkening, brightening, and inversion of images via UART between MATLAB and a Basys 3 FPGA.

Low-Power HBLSA SRAM Design Simulation

- Co-designed and simulated a 6T SRAM using a Hierarchical Bit-Line with Local Sense Amplifiers (HBLSA) to reduce dynamic power.
- Assisted with transistor sizing, schematic development, and precharge/sense amplifier circuit simulation to tune design parameters, validate results, and compare performance metrics.

Professional Experience

Touch Education Technology

Program Coordinator

Cambridge, MA
Jul 2025 - Present

- Facilitated online and in-person STEM programs by managing logistics, attendance, and academic support.
- Supported student safety and engagement during Boston-based workshops through local guidance and supervision.
- Initiated and maintained communication between students, mentors, and leadership to enhance program cohesion and community engagement.

Boston University Undergraduate Visitor Center

Student Admissions Representative

Boston, MA
May 2023 - Present

- Engaged with prospective students and families, answering questions about admissions and academics.
- Delivered campus tours as a BU Tour Guide and Scarlet Speaker, highlighting student life and university resources.
- Communicated effectively across diverse audiences to represent BU's mission and values.

Skills

Programs & Languages: Python, Unix, C, C++, Matlab, Assembly, Java, R, HTML, CSS, Verilog, Cadence Virtuoso

Other: Drill Press, Soldering, Microsoft Office, Visual Studio, Arduino, Microsoft Excel, PowerPoint, Word, Spanish fluency

Leadership & Affiliations

- **FLIP Executive Board – Secretary:** Managed communications and logistics to support events and foster community for first-generation students.
- **BU Admissions Student Diversity Board – Member:** Advised admissions on outreach and represented first-gen and underrepresented student perspectives.